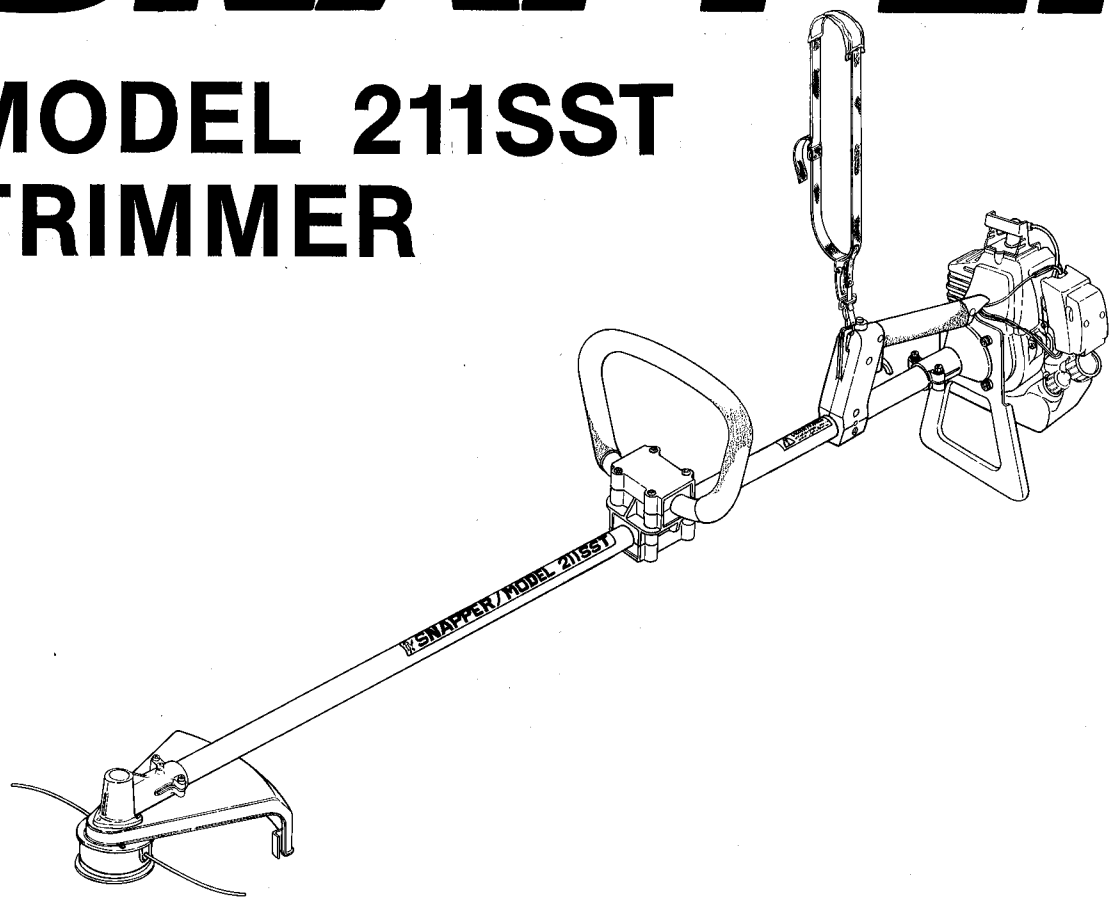
Safety Instruction & Operator's Manual for

# SNAPPER®

# MODEL 211SST TRIMMER




***Thank you for buying a Snapper Product! Before operating your trimmer, read this manual carefully and pay particular attention to the Important Safety Instructions on page two. Remember that trimmers and all power equipment can be dangerous if used improperly and keep in mind that safety requires careful use in accordance with the instructions and ---common sense!***

## GENERAL SPECIFICATIONS

| | |
|---|---|
| TYPE | AIR COOLED, TWO-CYCLE |
| DISPLACEMENT | 21.2 c.c. |
| IDLE (DECLUTCH)RPM | 2500* |
| CLUTCH ENGAGE RPM | 3300* |
| FULL OPERATING RPM | 7600* |
| FUEL MIX RATIO | 32to 1 |
| FUEL TANK CAPACITY | 17 oz. |
| SPARK PLUG TYPE | CHAMPION CJ8 |
| SPARK PLUG GAP | .028" |
| IGNITION TYPE | SOLID STATE |
| TRIMMER HEAD | Bump Head Twin Line |
| TRIM LINE DIAMETER | .095" |
| UNIT WEIGHT (Approx) | 13.0 lbs. |

*Approximate-plus or minus 200 RPM

**SNAPPER POWER EQUIPMENT**
McDonough,GA•30253

A FUQUA INDUSTRIES Company

MANUAL NO. 1-5793 (7/88 ISSUE)

# IMPORTANT SAFETY INSTRUCTIONS

**WARNING: Failure to comply with the following instructions may result in serious injury to the operator or other persons. The owner of the trimmer must understand these instructions and, furthermore, must allow only persons who understand these instructions to operate the unit. Each person operating the trimmer must be of sound mind and body and must not be under the influence of any substance which might impair vision, dexterity, or judgement. If you have any questions pertaining to your trimmer which your dealer cannot answer to your satisfaction, call or write the Customer Service Department at SNAPPER POWER EQUIPMENT, McDonough, Georgia, 30253. (Phone 404-957-9141).**

## TRAINING

1. Read this Manual carefully. Be thoroughly familiar with the controls and proper use of the equipment.

2. DO NOT allow children in yard when trimmer is operated.

3. DO NOT allow pre-teenager children to operate trimmer.

4. Allow only responsible teenagers with mature judgement to operate trimmer and only under close supervision.

5. Keep the area clear of all persons, particularly small children, and pets.

## PREPARATION

1. DO NOT operate trimmer without safety glasses or goggles.

2. Thoroughly inspect the area where the trimmer is to be used and remove all stones, sticks, wire, bones and other objects that could cause injury if thrown at high speeds.

3. Do not operate trimmer when barefoot or wearing open sandals. Always wear substantial footwear and long pants.

4. Never operate trimmer without proper guards, shields or other safety protective devices in place and properly connected. Inspect to determine that these safety devices are installed properly, are in good repair, and operate properly. If the condition or operation of these devices are questionable, they must be repaired or replaced before using the trimmer.

5. Fill gasoline tank before starting engine. Mix in an approved gasoline container. Do not smoke near open gasoline container. Do not fill gasoline tank indoors or when engine is running. Allow engine to cool for at least ten minutes before refilling. Wipe off any spilled gasoline before starting engine. Move away from fueling site before starting engine. Do not run engine indoors.

6. Use trimmer only in daylight or in good artificial light.

7. Never operate trimmer in wet grass. Keep a firm hold on the handle and walk slowly, never run.

8. Operate only where firm footing is assured. DO NOT operate from a ladder or any other place where use of hands would ordinarily be necessary to prevent falls.

## OPERATION

1. Do not overspeed engine.

2. Do not put hands or feet near or under rotating parts while engine is running.

3. Stop or idle engine when crossing gravel drives, walks, or roads, and under any conditions where thrown objects might be a hazard.

4. After striking a foreign object or if unit vibrates abnormally, stop the engine, disconnect and secure spark plug wire. Inspect the unit for any damage and repair the damage.

5. Stop engine before leaving unit.

6. Before cleaning, repairing or inspecting, make certain head or blade has stopped. Disconnect and secure spark plug wire away from plug to prevent accidental starting.

7. When using blade, hold unit firmly and wear harness to prevent loss of control due to blade bounce upon contact with hidden solid objects.

## MAINTENANCE AND STORAGE

1. Keep all nuts, bolts, and screws tight to be sure unit is in safe operating condition.

2. Never store unit with gasoline in the tank inside of a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.

3. To reduce fire hazard, keep unit free of grass, leaves or excessive grease.

4. Have your trimmer inspected and serviced each year by an authorized Snapper dealer. Determine if any additional devices are available which might upgrade the safety of your trimmer.

5. Use only factory specified Snapper attachments, accessories and fasteners.

# OPERATING INSTRUCTIONS

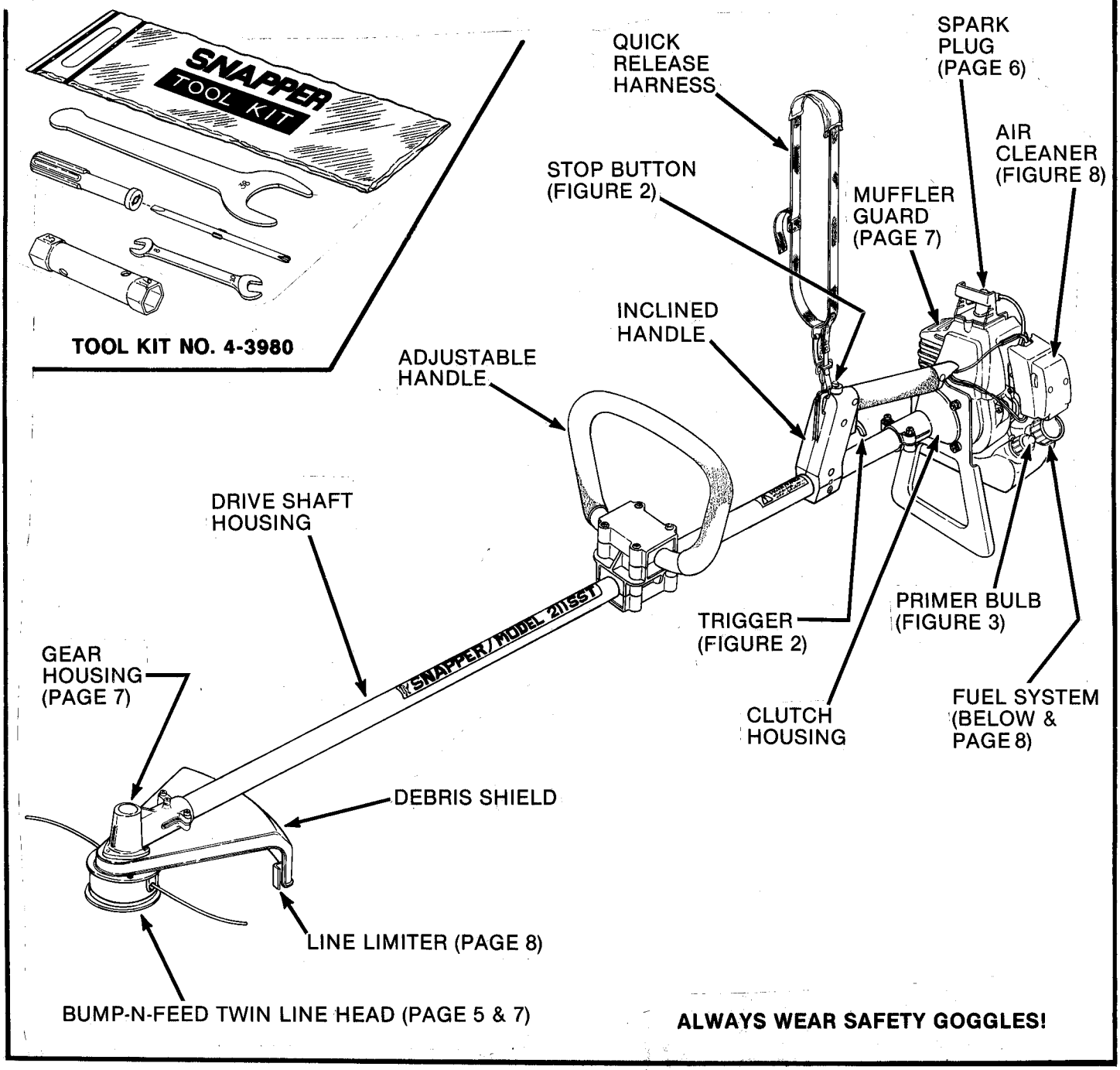



FIG. 1 - LOCATION OF CONTROLS & OTHER FEATURES

## PRE-MIX FUEL (32 to 1 RATIO)

For proper lubrication, the engine must operate on an exact mixture of gasoline and 2 cycle air-cooled engine oil. Use a 32 to 1 mixture. Use a good quality regular grade leaded or unleaded gasoline and SNAPPER special formulated 2-cycle engine oil. Do not use the special 50:1 ratio oils. The 32 to 1 ratio equals 4 ounces of oil to each gallon (U.S. Standard) of gasoline, (or 16 oz. to 4 gallons gasoline). Refer to the chart below for correct 32 to 1 ratio mixtures:

Pre-Mix the fuel in an approved container while observing all safety precautions relating to handling of fuel. Add some gasoline to the container first then the oil. Close the container and shake vigorously to thoroughly mix the fuel; open the container and add the remaining amount of gasoline to correct the ratio. Shake the container to mix the fuel each time before filling the fuel tank. **DO NOT** add fuel to unit while hot...allow engine to cool.

32:1 RATIO - U.S. STANDARD FLUID MEASUREMENTS

| GALLONS GASOLINE | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| OUNCES 2-CYCLE OIL | 4 | 8 | 12 | 16 | 20 |

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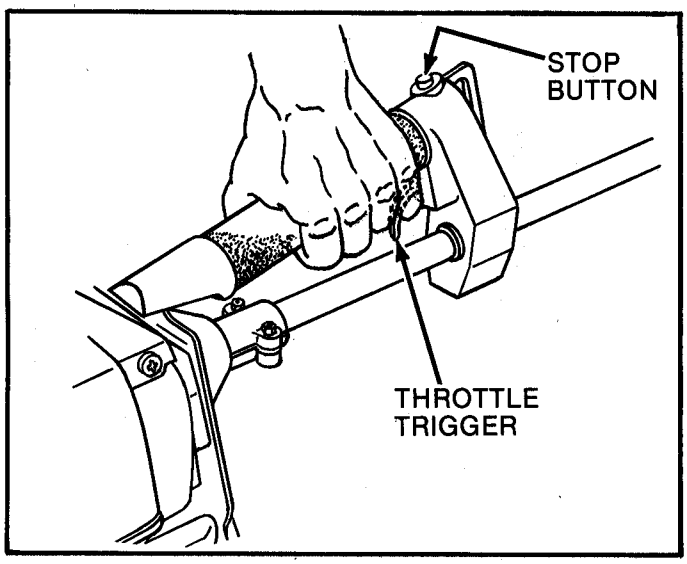

FIG. 2 - CONTROLS ON HANDLE

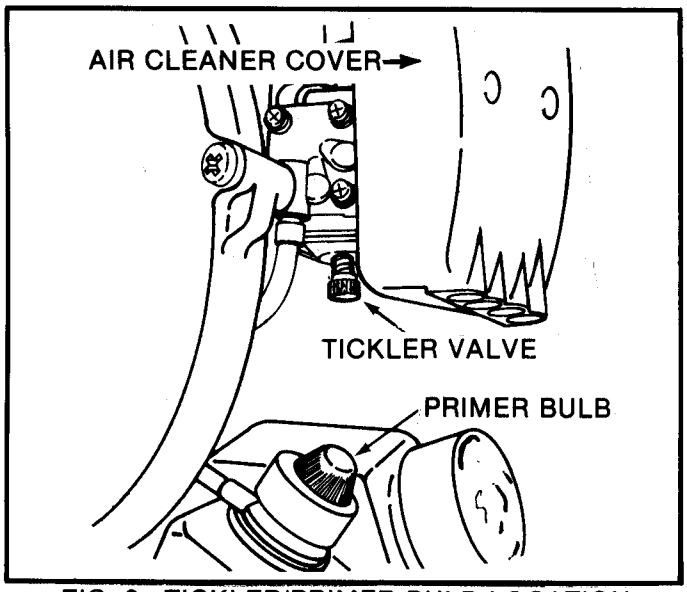

FIG. 3 - TICKLER/PRIMER BULB LOCATION

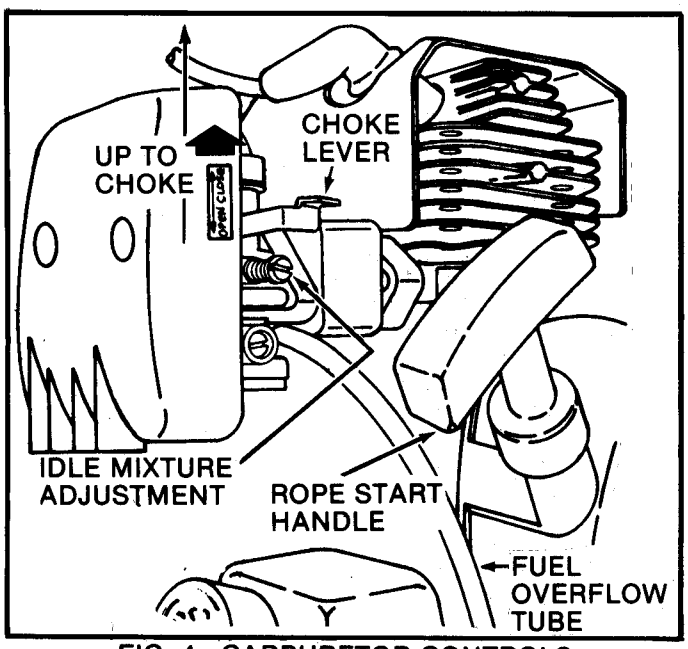

FIG. 4 - CARBURETOR CONTROLS

## START-STOP PROCEDURE

Become thoroughly familar with the location and function of all controls before operating the trimmer. Be prepared to stop quickly in the event of an emergency--stop the engine by pushing and holding the red push button on the inclined handle down until the engine stops. Stop the cutting head by releasing the throttle trigger which allows the speed to drop below 3400 RPM where declutching of the drive will occure. After filling the fuel tank as described in foregoing, the following procedure is suggested for starting the unit.

1. Place the trimmer on ground or other flat surface with weight firmly balanced on engine stand and front shield.

2. While holding tickler valve up (see figure 3) pump the primer bulb on fuel tank until fuel starts flowing out of the overflow tube (Figure 4). Continue pumping until no air bubbles are evident in the tube. NOTE: Make sure the tickler valve is held up while priming. If primed while in down position, carburetor flooding and hard starting will occur. No priming needed with warm engine.

3. Move to left side of engine and facing rear of unit, squeeze throttle trigger with the little finger of your left hand while holding the unit down (Figure 2).

4. Slide choke lever to full CHOKE position (cold start), then pull on starter rope with your right hand with short quick strokes several times until the engine "pops" (Figure 4).

5. Slide the choke lever to PARTIAL position and repeat pulling the starter rope but in full strokes while holding the throttle trigger against the handle until the engine starts and runs. CAUTION: The trimmer head will turn and continue turning until the trigger is released.

6. After a brief 5 second warm-up period at full throttle, move the choke lever to RUN position then release the trigger to return engine to idle speed.

7. Allow the engine to warm up at idle for a short period of time then lift unit and slip on the harness over your head onto your left shoulder.

8. Grasp the J-handle with your left hand and squeeze the throttle trigger with your right hand to increase speed beyond 3400 R.P.M. to engage the clutch and start the trimmer head or cutting blade. Refer to following section for operating instructions.

9. Stop unit by depressing and holding the red button down with your right thumb until engine comes to a complete halt. Release trigger beforehand to declutch drive whenever time permits.

NOTE: To prolong life of recoil starter and rope, do not pull rope out all the way or allow it to snap back when released--carefully guide it back into retracted position after each pull.

## TRIMMING OPERATION

When using the Model 211 in the trimmer mode with the BUMP-N-FEED head installed, keep each end of the twin line not less than 3 inches away from the outer edge of the head. This would produce an approximate cutting path of 10-1/2 inches. The line can be extended to a maximum of 6-3/4 inches to produce an 18" path, however, if extended more than this, the ends of the line will be clipped off by the line cutting blade which is part of the debris shield.

LINE ADJUSTMENT: The BUMP-N-FEED head furnished as original equipment on the Model 211 uses centrifugal force to automatically release about 1" of line each time the knob is bumped while the unit is running at high operating speeds. The line will not advance due to insufficient centrifugal force at low speed. Also note that automatic line release is less likely to occur as the line becomes shorter. Keep the line extended at least 3" for smoother release. To release new line, operate the unit at highest RPM and bump the knob lightly against a clear surface such as bare ground as shown in Figure 6. The unit may stall if bumped in tall or dense grass or brush. The line may also be advanced manually with the engine stopped. To advance manually, push the bump knob and hold against the head and pull out desired length of line. If the line is too long, release the knob and turn in direction indicated REWIND LINE. Refer to the Service Section for replacing line and or BUMP-N-FEED head.

LINE TRIMMER OPERATION: Always swing trimmer slowly from right to left in semi-circular motion. To trim, hold the cutting head at an angle to the ground. Allow the tips of the line to do the trimming. Do not force - let the unit trim at natural pace. Hold the head so that the cutting line is parallel to the ground for mowing and or sweeping operation. Keep the head above the ground to avoid scalping and unnecessary wear of the head.

EDGING OPERATION: For light edging jobs along walkways and driveways, loosen the two bolts (identified as "A" in figure 7) and rotate gear head/shield counter clockwise until it stops then retighten bolts. Always wear goggles and protective clothing. For heavy duty edging jobs, contact your Snapper Dealer for details on the optional steel blade edger kit.

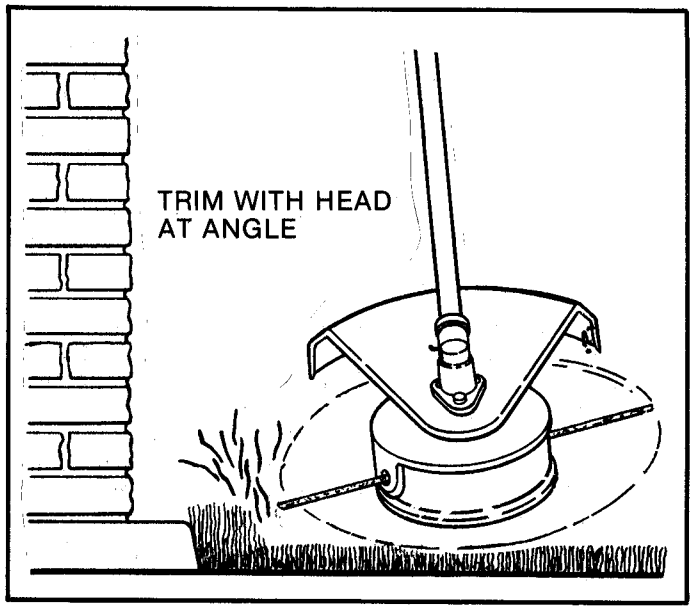


FIG. 5 - TRIMMING OPERATION

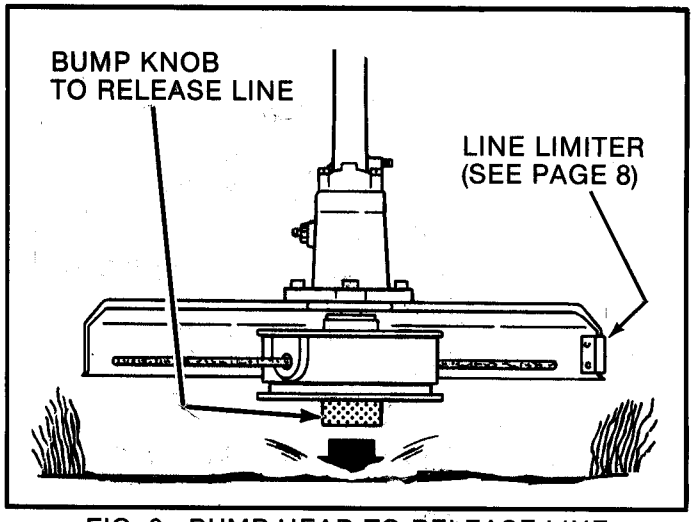


FIG. 6 - BUMP HEAD TO RELEASE LINE

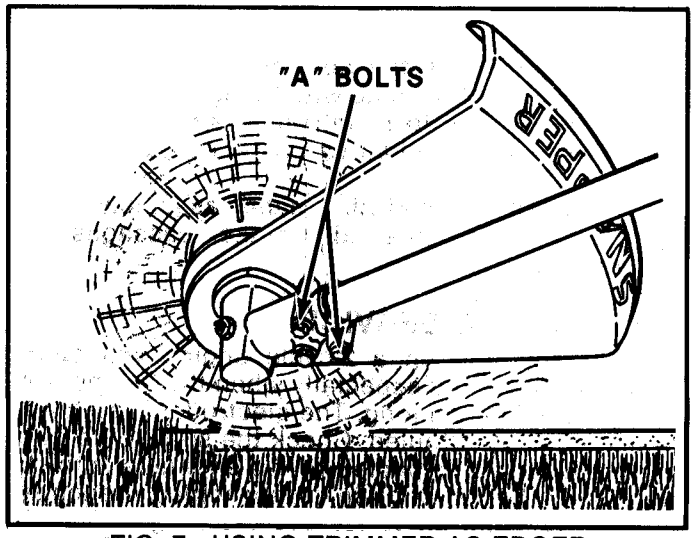


FIG. 7 - USING TRIMMER AS EDGER

# SERVICE

## SERVICE ASSISTANCE & PARTS

To retain the original quality of your trimmer, be sure to use genuine SNAPPER replacement parts only. This is of particular importance when the blades, trimmer heads and retaining hardware are involved--do not use substitutes! Most routine services covered in this section can be performed quickly and easily using the tools provided in the trimmer tool kit. Contact your SNAPPER dealer for service assistance and replacement parts. The information in the parts section furnished with your trimmer is and subject to change. Complete, up-to-date parts information is available at your dealer. For the nearest SNAPPER dealer, check the yellow pages of your telephone directory under the heading LAWNMOWERS.



(continued on next page).

## AIR CLEANER-SERVICE EVERY 25 HOURS

Every 25 hours, or more frequently if operating under extremely dusty or dirty conditions, service the air cleaner as follows. Replace any parts found to be damaged (Figure 8).

1. Use the Phillips head screwdriver provided in tool kit to remove the two air cleaner cover retaining screws.

2. Remove the cover. The element, holder and screen will normally stay inside the recess in the air cleaner cover. Carefully pry the holder out of the recess then remove the filter element.

3. Wash the element in solution of dishwashing detergent and water, squeeze dry then lubricate the element with small amount of SAE 30 weight engine oil then squeeze element again to evenly distribute the oil.

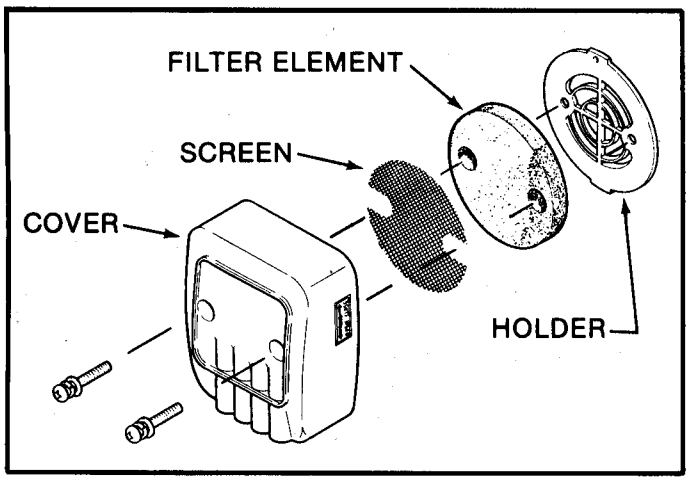


FIG. 8 - AIR CLEANER COMPONENTS

4. Wash the cover and metal screen in position in dishwashing detergent solution before reinstalling screen, element and holder in the recess in cover.

**NOTE:** Make sure flat surface of holder is facing toward element-the side with the raised ridge or ring must be outside to fit into the carburetor opening otherwise unfiltered air can enter carburetor.

5. Reinstall serviced air cleaner assembly on carburetor. Make sure air intake passages face downward.

## SPARK PLUG-SERVICE

The spark plug on a 2-cycle engine will quickly become oil fouled especially when the engine is run at low speeds too long. The electrodes also tend to become carbon fouled. Check the spark plug at frequent intervals especially if the engine fails to start or is difficult to start. Use the spark plug wrench supplied in the tool kit to remove the plug. Keep the electrodes clean and the gap set at .028". Replace plug with a Champion CJ8 or equivalent spark plug.

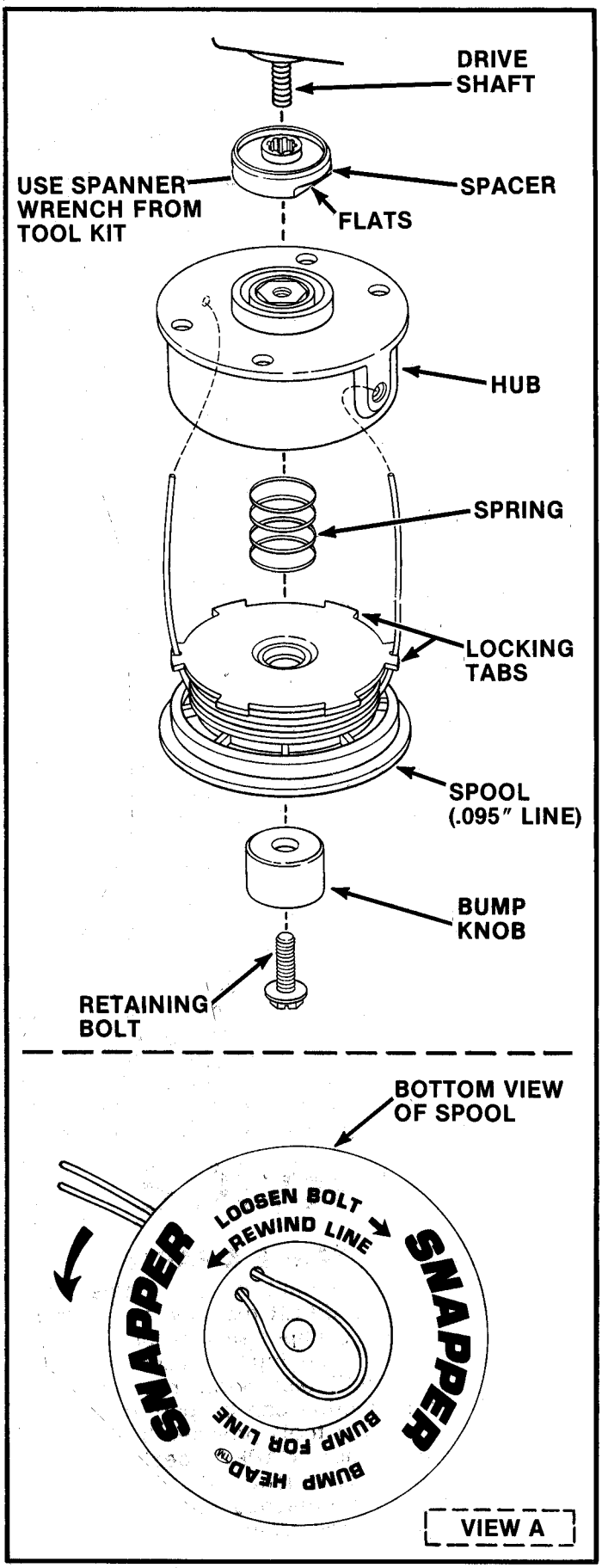


FIG. 9 - BUMP HEAD COMPONENTS

## BUMP-N-FEED HEAD

The BUMP-N-FEED head does not have to be completely removed to replenish the trimming line. New line can be wound on the spool or a new spool can be purchased with line installed. Make sure .095" monofilament line is used. Use the correct Snapper replacement line or spool - DO NOT use substitutes, especially wire which can be dangerous (Figure 9).

**REPLENISH LINE** with engine stopped as follows:

1. Place unit on work bench with weight resting on shield and engine stand.

2. Grasp spool and hub and squeeze spool upward against hub then twist spool to the left until tabs lock the spool to the hub. The tabs can be viewed thru the four holes in the hub.

3. Remove the bump knob retaining bolt by turning to the right.

4. Twist the spool to the right to unlock tabs then pull the spool downward to remove.

5. If using the replacement spool, insert ends of twin strands thru openings in hub. With spring in position push the spool into position in hub, cut rubber band before pushing spool all the way into locked position. Reinstall the bump knob and retaining screw, then unlock spool by twisting it to the right.

**REPLACING LINE:** Use 40 feet of Snapper .095" monofilament line to replenish line using the existing spool. To install line, loop the line into two equal lengths, insert ends thru the two holes shown in view A of figure 9 then wind both strands onto the spool in the direction indicated by arrow and wording REWIND LINE on spool.

**REPLACING HEAD:** The head does not have to be disassembled to remove. To remove the BUMP head, hold the spacer flats with the spanner provided in tool kit and turn the bump head to the right until separated from the shaft. When reinstalling the bump head make sure the spacer is in position shown in figure 9 and is flush against the underside of shield. Hold in position with fingers or pliers while installing head.

## GEAR HOUSING-SERVICE EVERY 50 HRS.

Keep hands away from the gear housing after extended periods of operation as it gets very warm. After every 50 hours of operation, grease through fitting with a good quality lithium base #2 multipurpose grease. (Fig. 10).

## DRIVE SHAFT-CLUTCH

The 211SST features a heavy duty solid steel drive shaft which runs in five bushings inside the main drive tube. The drive shaft does not normally require service on a regular basis, however, if a rattling noise is detected after extended use, this could indicate bushing and or shaft wear. In this event, return the unit to a SNAPPER dealer for repair. A slipping clutch may be caused by excessive wear or oil on the clutch drum. Return the unit to your SNAPPER dealer for clutch repair.

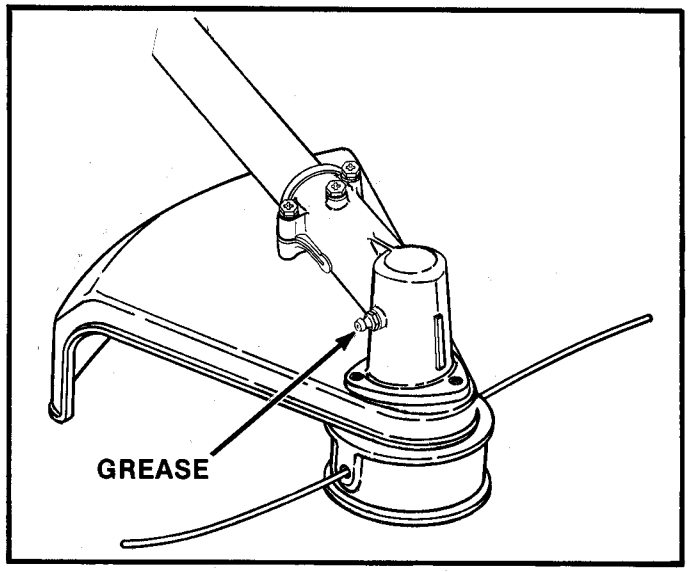


FIG. 10 - GEAR HOUSING DETAIL

## SPARK ARRESTOR MUFFLER

The muffler on the model 211SST engine includes a built-in spark arrestor. The arrestor functions to prevent sparks generated by the engine from being discharged with the exhaust gases. Without proper service, the arrestor screen will become clogged with carbon causing engine power loss. The screen should also be checked to make sure it has not deteriorated and allow sparks to escape.

**SERVICE AFTER EACH 5 HOURS:** After the muffler has cooled down, take off the guards, remove the cover flange bolt, washer and cover. The cover gasket should remain inside the cover or body. Remove the arrestor plate and wire brush the screen. Clean out any carbon found in the exhaust port area, inside the body and or arrestor plate. Reassemble components after servicing. Make sure the gasket stays in position. Replace screen and/or other components showing signs of deterioration. WARNING: Never touch **hot** muffler or guards!

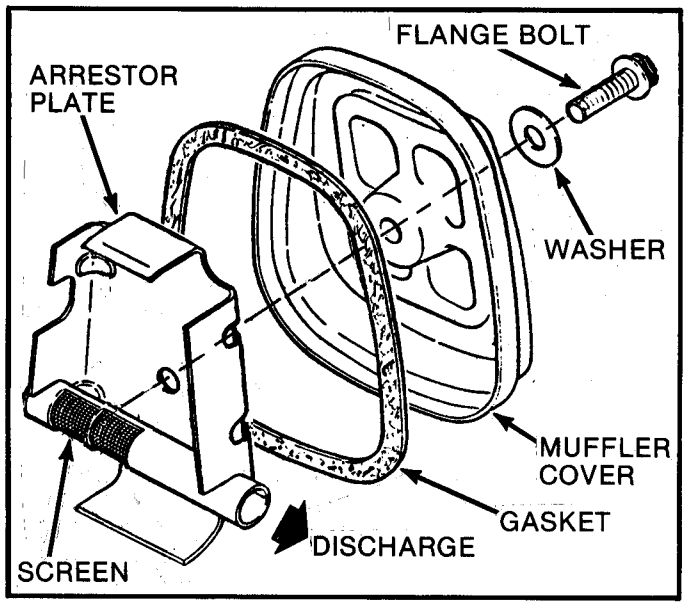


FIG. 11 - SPARK ARRESTOR MUFFLER



(over)

# SERVICE (Continued)

## FUEL SYSTEM SERVICE

An all position diaphragm type carburetor is used on the 211SST. The carburetor has fixed main jet but has adjustable idle speed and idle mixture adjustments. Do not tamper with these adjustments. If the engine will not start, stalls at idle or stalls under rapid acceleration, and the cause is not due to the air cleaner or muffler, or fouled plug readjust the carburetor as follows: Refer to figure 4 for adjustment points (Page 4).

1. With engine stopped, turn the idle mixture screw to the right until the needle bottoms lightly--do not force it closed. Turn it to the left 1-1/2 turns.

2. Start the engine and allow time for it to warm up. Check idle speed operation. If the engine stalls, turn the idle speed to the right 1/8 turn at a time until it idles properly. (NOTE: The trimmer head or blade should not move at idle speed.)

3. Test acceleration. If the engine stumbles or stalls, turn the idle mixture screw to the left 1/8 turn at a time until proper acceleration is achieved. Recheck idle speed setting and readjust as needed.

NOTE: Keep the carburetor free of gum formation by using only clean fresh fuel. Whenever possible, drain the fuel or run until the fuel tank is dry, particularly when the trimmer is to be stored for any length of time.

## LINE LIMITER SERVICE

Keep the cutting edge of the line limiter sharp by filing frequently with a file. Limiting the line to the design maximum of 18" cutting path provides optimum trimming-cutting operation. Replace the limiter when it becomes excessively worn or badly nicked. Remove the two locknuts and screws, remove the old limiter, install the replacement in its place and secure with the new fasteners.

## OFF-SEASON STORAGE

Before storing the unit during the off-season or for any period where the unit will not be used for 30 days or more, preserve the unit by taking the following steps:

1. Run the engine dry of fuel or drain all fuel from the tank.

2. Remove the spark plug, squirt small amount of 2-cycle engine oil into cylinder, pull rope starter several times and reinstall the plug.

3. Place dust cover over unit and store in high area out of reach of children and dry shed protected from weather.

## MANUFACTURER'S 2 YEAR LIMITED WARRANTY

For two (2) Years from purchase date for the original purchaser's residential, non-commercial use [ninety (90) days from purchase date for the original purchaser's commercial, rental, or other non-residential use], and for 3 years on the ignition module, SNAPPER POWER EQUIPMENT, through any SNAPPER dealer will replace, free of charge, any part or parts found upon examination by the factory at McDonough, Georgia, to be defective in material or workmanship or both.

All transportation cost incurred by the purchaser in submitting material to a SNAPPER dealer for replacement under this warranty must be borne by the purchaser.

This warranty does not apply to parts that have been damaged by accident, alteration, abuse, improper lubrication, normal wear, or other cause beyond our control.

There is no other express warranty.

Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to two (2) years from purchase date for the original purchaser's residential, non-commercial use [ninety (90) days from purchase for the original purchaser's commercial, rental or other non-residential use], and to the extent permitted by law any and all implied warranties are excluded. This is the exclusive remedy. Liabilities for consequential damages, under any and all warranties are excluded.

Some states do not allow limitations on how long an implied warranty lasts,or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

**WARNING: THE USE OF REPLACEMENT PARTS OTHER THAN GENUINE SNAPPER PARTS MAY IMPAIR THE SAFETY OF SNAPPER PRODUCTS AND WILL VOID ANY LIABILITY AND WARRANTY BY SNAPPER ASSOCIATED WITH THE USE OF SUCH PARTS.**

**IMPORTANT:** Please fill out the attached SNAPPER Product Registration Card immediately and mail to: SNAPPER POWER EQUIPMENT, McDONOUGH, GEORGIA 30253